

REMARKS

Claims 1-19 are pending in the present application. Claims 5-19 stand withdrawn as being directed to a non elected invention. Claims 6 and 9-19 are canceled and claims 20-22 are added with this Amendment.

Claim 1 has been amended to correct a grammatical error. This amendment makes clear that the resistive material device comprises a structured resistive material. Claim 5 has been amended to incorporate the limitation of claim 6. New claim 20 is supported by original claim 13. Newly added claim 21 is supported by the Specification at page 9, line 26. Claim 22 is supported by the Specification at page 10, lines 9-12.

Claims 1-8 (Group I) have been further restricted as follows:

Group I-A: Claims 1-4; and

Group I-B: Claims 5-8.

Applicants elect Group I-A, claims 1-4, with traverse. The M.P.E.P. at §803 states that an application may be properly restricted to one or more claimed inventions only if (1) the inventions are independent or distinct as claimed, and (2) there is a serious burden on the Examiner. Thus, even if appropriate reasons exist for requiring restriction, such a requirement cannot properly be made unless there is an undue burden on the Examiner to examine all of the claims in a single application. Here, no such undue burden is present.

Although the Examiner has alleged different classifications for the inventions of Groups I-A and I-B, it would seem that the search and examination involved for both groups of invention would substantially overlap. For example, claim 1 of the elected invention of Group I-A reads as follows:

A method of manufacturing a structured resistive material device comprising the steps of: a) providing a substrate having a structured surface; b) disposing a layer of resistive material on the structured surface of the substrate; c) disposing a layer of conductive material on the resistive material layer; and d) separating the substrate from the resistive material layer to provide a structured resistive material to provide a resistive material device.

Claim 3, which depends from claim 1, further recites that the structured surface is substantially corrugated. Claim 5 of the non-elected invention of Group I-B sets forth a method of manufacturing a structured resistive material device which involves:

providing a conductive material layer having a structured surface;
and
disposing a layer of resistive material on the structured surface of
the conductive material layer, wherein the structured surface of the
conductive material layer is substantially corrugated.

It would thus appear that there would be significant overlap in the search and examination involved for the invention of Groups I-A and I-B. Because of the apparent overlap in search and examination, a serious burden would not be imposed on the Examiner to examine all of the claims in a single application, and restriction is improper.

Claims 1 and 3 have been rejected under 35 USC § 102(e) as being anticipated by Fjelstad (US 6,821,821). Applicants respectfully traverse.

Applicants' claimed invention provides a method of manufacturing a structured resistive material device comprising the steps of: a) providing a substrate having a structured surface; b) disposing a layer of resistive material on the structured surface of the substrate; c) disposing a layer of conductive material on the resistive material layer; and d) separating the substrate from the resistive material layer to provide a resistive material device comprising a structured resistive material.

The Official Action points to Fig. 5 of the Fjelstad patent. Figs. 5A-5H do not anticipate Applicants' claimed invention. These figures show the manufacture of a semiconductor chip package. See column 3, lines 46-48, which reads:

FIGS. 5A through 5H show a side view of an alternate method of manufacturing a semiconductor chip package, according to the '671 disclosure.

Neither these figures, nor the related text at column 7, lines 14-65, disclose the step of separating the substrate from the resistive material layer to provide a resistive material device comprising a structured resistive material. All these figures show is a method to manufacture a semiconductor package. No structured resistive material is disclosed. Applicants respectfully request that this rejection be withdrawn.

Claims 2 and 4 have been rejected under 35 USC § 103(a) as being unpatentable over Fjelstad. Applicants respectfully traverse.

Fjelstad is discussed above. This patent fails to disclose or suggest depositing a conductive material on a structured resistive material layer, as is required by Applicants' claims. The Fjelstad patent only discloses depositing a conductive material in cavities in a substrate followed by depositing the resistive material on the conductive material. Nothing in this patent teaches or suggests to one skilled in the art to deposit resistive material on the structured substrate surface and then deposit the conductive material on the resistive material, as required by Applicants' claims.

Further, the Fjelstad patent does not teach or suggest corrugated structures. The only structure taught by this patent are cavities, i.e. holes, which are filled with a conductive material. Such cavities are formed only for the purpose of forming bond pads for semiconductor packages. These cavities filled with a conductive material are necessary for bond pad placement in the Fjelstad patent. In contrast, Applicants' invention is directed to a method of manufacturing resistive material that has a resistivity that is axis dependent, i.e. the resistivity in a first direction is different from the resistivity in a second direction. Such is neither taught nor suggested in Fjelstad.

Applicants submit that the Examiner has not made out a prima facie case of obviousness and respectfully request that this rejection be withdrawn.

Claims 1-4 have been rejected under 35 USC § 103(a) as being unpatentable over Fjelstad in view of Sato et al. (US 5,384,076). Applicants respectfully traverse.

Fjelstad is discussed above.

Sato et al. add nothing to the disclosure of Fjelstad. The Sato patent discloses certain organometallic compounds useful as precursors for forming a resistive material. Such precursors are deposited on a surface and calcined to form the resistors. Sato et al. are cited merely for teaching different thickness of resistive material. Nothing in the Sato patent teaches or suggests a structured resistive material. More particularly, this patent fails to teach or suggest a

substantially corrugated resistive material.

There is nothing in either reference alone or in combination that teaches or suggests Applicants' claimed invention. Even if one were to combine these references, one would only be lead to use the organometallic compounds of Sato et al. to form the resistive material in the process of Fjelstad.

Applicants submit that the Examiner has not made out a prima facie case of obviousness and respectfully request that this rejection be withdrawn.

Favorable reconsideration in the form of a notice of allowance is courteously requested.

Respectfully submitted,



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Date: July 20, 2005